Designing an Automotive Sunshade

Your engineering team has been contracted by a Vin-Tel, a company that manufactures accessories for cars. Vin-Tel is interested in producing sunshades that will help minimize the temperature increase inside the car when parked in the sun. You are tasked with setting up model experiments to test various materials and configurations for the sunshade.

Your team is competing against other engineering teams to get a long-term R&D contract with Vin-Tel. Your deliverable to the CEO of Vin-Tel is a report in which you provide the following information:

1. A detailed description of the tests you performed
2. Data showing your test results
3. A recommendation on the material the company should use
4. Justification for your recommendation
5. Cost analysis of the options (only if you are looking to get a bonus)

MATERIALS

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| --- | --- |
| Model Sun (lamp) | Light Sensor |
| Model Car (empty 2 L soda bottle) | Surface Temperature Sensor |
| Various sample materials to test |  |
|  |  |

REferences

Some references you might use in this project are:

1. <http://www.roadandtravel.com/autonewsandviews/2005/sunshades.htm>
2. <http://www.ehow.com/how_5877447_make-sun-shade-autos.html>